

Pennsylvania's Great Lakes Charter Fishing Industry in 2002

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This publication summarizes the findings of the Great Lakes Sea Grant Network study on the charter industry in the Great Lakes. Individual fact sheets have been developed in conjunction with the Great Lakes Fisheries Leadership Institute for the following regions: Illinois-Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania, and Wisconsin. The goal of the Great Lakes Fisheries Leadership Institute is to provide the next generation of fisheries leaders for the Great Lakes region with the skills they need to effectively interact with fisheries management agencies. This document was produced by the Ohio Sea Grant College Program as a part of the Great Lakes Fishery Leadership Institute project of the Great Lakes Sea Grant Network.

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(www.greatlakesseagrant.org).

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Introduction

In the fall of 2002 and winter of 2003 the Great Lakes Sea Grant Network conducted a comprehensive survey of the charter fishing industry in the Great Lakes. The survey is an effort to provide an update on the status, characteristics and economics of the charter fishing business in the Great Lakes and is modeled after a similar survey conducted in 1994. All data reported here are for the year 2002.

Methods

The Pennsylvania and the Ohio Sea Grant programs surveyed Pennsylvania's charter-fishing captains in October and November of 2002 using a modified Dillman mail survey technique (Dillman 1978). Non-respondents were sent up to three reminder letters. In 2002 there were 28 licensed Pennsylvania captains, this represents a decline of almost 32% from the 41 captains in 1994. A total of 12 captains returned surveys with usable data, a response rate of almost 43%. Not all respondents filled out every item in the questionnaire.

Business

The typical Pennsylvania charter-fishing captain in 2002 has been licensed for 11.25 years. All responding captains operate one boat, which is typically 25.4 feet long, over 14.2 years old, and powered by an inboard/outdrive motor (58.3%) (Table 1).

The average replacement cost for a Pennsylvania charter vessel is \$46,182, and for onboard business-related equipment is, \$9,955. About 75% of the respondents use a vehicle for towing their boat or other charter-related business. The average replacement cost of the vehicle is \$25,450; for the trailer it is \$5,430. The vehicle is used for boat towing 28% of the time and for other charter business 37% of the time.

Captains

All 12 of the responding captains were "six-pack" operators, licensed to carry no more than six passengers. Notably, only one of the twelve (8%) responding captains cite the charter business as their primary source of income (Table 2).

Almost 64% of responding captains are members of a professional charter captains association. The top three cited benefits from membership in a professional charter captains association are advertising, drug testing, and Increased business (Table 3).

Trips

Responding captains average 24.9 full-day and 9.5 half-day paid charter trips per year (Table 4). Almost 61% of these trips are for walleye. Applying the response data to the total population of 28 active captain's yields an estimated 964 charter trips of which over 72% were full day and almost 28% were half-day trips. Half-day trips were defined as trips lasting less than seven hours.

Table 1
Ownership and Organization of Pennsylvania's Charter Boat Fishing Businesses

Characteristics	Percent of Respondents	Number of Respondents
Business Ownership		12
Sole proprietor	100%	12
Partnership	0%	0
Corporation	0%	0
Business Organization		12
Owned own boat	92%	11
Leased or rented boat	8%	1
Salaried Employee	0%	0
Freelance hire per trip	0%	0
Other arrangement	0%	0

Table 2
Reasons for Entering /Remaining in the Pennsylvania Charter Fishing Business
12 Respondents were asked to check all that apply.

Reason	Percent of Respondents
Help people enjoy fishing	92%
Like the work	67%
Secondary source of income	58%
Primary income source	8%
Other	8%

Table 3
Benefits of Membership in a Pennsylvania Professional Charter Boat Association
12 Respondents* were asked to select the top three reasons.

Benefit	Percent of Respondents
Advertising	50%
Drug testing	42%
Increased business	33%
Sharing charters	25%
Industry representation to state, federal, and local authorities	25%
Education on current issues and regulations	25%
Group insurance	25%
Get tips about fishing	17%
Pricing information	8%
Business operation ideas and advice	8%
Other benefits	0%

* 64% are members of a charter association.

Table 4
Estimated Trips and Revenues* for the Pennsylvania Industry
12 Respondents

Fish Species	Number of trips	Average No. Trips/business	Average Charge/Trip	Revenues Earned
Steelhead				
Full day	49	1.8	\$404	\$707
Half day	54	1.9	\$330	\$634
Lake trout and Salmon				
Full day	0	0	\$383	\$0
Half day	16	.6	\$330	\$191
Smallmouth bass				
Full day	100	3.6	\$349	\$1,249
Half day	33	1.2	\$324	\$379
Walleye				
Full day	509	18.2	\$429	\$7,795
Half day	82	2.9	\$354	\$1,034
Yellow perch				
Full day	40	1.4	\$350	\$497
Half day	82	2.9	\$283	\$826
Subtotals				
Full day	698	24.9		\$10,248
Half day	266	9.5		\$3,064
Totals	964	34.4		\$13,312

* The numbers of trips are extrapolations of respondent trip rates applied to the total population of Pennsylvania Great Lakes charter captains. Revenues are calculated from the average number of trips per business multiplied by the average charge per trip.

Table 5
Services Offered by Pennsylvania's Charter Boat Operators

Service or Provision	-----Percent of Respondents-----		
	Included in Base Charter Fee	Included for Additional Fee	Number of Respondents
Tackle	100%	0%	12
Ice	100%	0%	12
Fish Cleaning	100%	0%	10
Bait	100%	0%	11
Photos/Video of trip	85%	0%	7
Lodging/Food	0%	25%	4

Table 6
Average Annual Operating Costs for Pennsylvania Boat-Owning Captains
9 Respondents

Item	Expense
Fuel/Oil	\$1,443
Dockage	803
Equipment repair	672
Miscellaneous	659
Advertising	651
Office & communications	617
Insurance	614
Boat storage fees	357
Labor (hired)	319
Boat maintenance & repair	290
License fees	83
Drug testing/Professional dues	79
Boat repair not covered by insurance	33
Boat launch fees	0
Total Operating Costs	\$6,620

July is the busiest month for chartering. About 28% of the total trips taken trips by responding captains were in July. The next busiest months are August with about 27% of the trips, June with almost 16%, September at 15% and October at 10%. Responding captains reported less than 6% of the total trips for May. No trips were reported for March or April.

Charter fees vary according to target species, length of the charter, and services offered. The most popular trip was the whole day walleye charter trip; its cost averaged \$429 per boat (range \$300 to \$650).

Services and Provisions

All respondent charter businesses provided bait, tackle, ice and fish cleaning as part of their standard charter trip service. Most provided trip photos or videos. About 25% of respondents would arrange lodging and food for an additional fee (Table 5).

Costs and Returns

For responding captains, the largest annual operating expenses were boat fuel, boat dockage, and equipment repair (Table 6). Boat loan payments are a high cash outlay but are not part of operating costs.

The average cash requirement to operate the charter firm includes the operating expenses plus the boat loan payments. Average annual boat loan payments including principal and interest are \$4,650 (Table 7). The average annual cost to operate a Pennsylvania charter firm is \$11,270 for those making boat loan payments and \$6,620 for those who do not. This means that the typical charter firm that owns and operates a single vessel must generate sales of either \$11,270 or \$6,620 just to meet the cash needed to pay the day-to-day bills to operate the charter business depending on whether or not the boat is paid off.

Estimated average annual revenue is \$13,312. The result is a net positive cash flow of \$2,042 for firms making boat loan payments and a positive \$6,692 for firms not making boat loan payments. That is, if a firm was making boat loan payments they could not pay the day-to-day bills to operate the charter business from the revenues earned from chartering.

Economic costs are the costs of operating the charter firm except for the cost of a boat loan. The economic costs include operating costs (\$6,620) plus capital costs. Capital costs include depreciation of the boat, and the opportunity cost of owning a boat instead of investing in stocks, bonds, or some other enterprise.

The average annual depreciation, as reported by about one sixth of the responding captains was \$1,000.

Estimated replacement cost of the boat (\$\$46,182) plus the equipment (\$9,955) totals \$56,137. Interest costs based on 5% of the replacement cost of the boat and equipment are \$2,807. Thus capital costs (depreciation + interest) are \$3,807 (\$2,807 + \$1,000). The economic cost to operate a typical Pennsylvania charter firm is \$10,427 for a firm depreciating a vessel and \$9,427 for a firm with a fully depreciated boat. Any revenue in excess of these figures is the return to owner labor and management.

To provide a positive return to the operating captain for time and labor, the average Pennsylvania charter business would have had to generate sales of over \$10,427 or \$9,427 to cover the average operating and

capital costs. Depending on the depreciation situation, the average Pennsylvania charter firm operated at a net return of either a positive \$2,885 or a positive \$3,885 for the owner's time and labor. At an average price of \$429 for a full day walleye charter a captain would have to run 24 or 22 full day walleye trips to cover average operating and capital costs.

Promotion

Approximately 85% of Pennsylvania charter customers come from 50 miles or further from the charter firm's homeport bringing nature-based tourism dollars into the community.

Captains used various methods of marketing and advertising and rated them for effectiveness on a scale of 1 (not effective) to 3 (very effective) (**Table 8**). Two advertising methods that we included in the 2002 survey that were not in the 1994 survey were a "world wide web site" and "tourism promotion agency publications/web site." Captains consider word of mouth, brochures, their web site, and direct mail as the most effective means of advertising. All respondents use word of mouth, 92% brochures, 67% use a web site, almost 50% use sport and travel shows and about 50% use direct mail to advertise their charter business services.

Lake Information

Only one of the 11 responding captains utilizes the Great Lakes Forecasting System web site (*superior.eng.ohio-state.edu*) and another captain uses the Sea Grant Coastwatch web site (*coastwatch.msu.edu*) for information on lake waves, water currents, surface temperatures and lake status. The two captains accessing these web sites use them to help make decisions, plan charter trips and improve charter safety.

Industry Trends and the Future

In 2002, Pennsylvania charter firms made an estimated 964 charter trips compared to an estimated 1,894 trips in 1994 (Kuehn and Dawson 1996). The 28 charter captains generated an estimated \$372,750 in gross sales in 2002 (28 estimated charter firms x \$13,312). This is compared to the inflation adjusted estimated of \$302,000 in gross sales generated by 41 captains in 1994 (Kuehn and Dawson 1996).

Captains were asked to select the three most important problems facing the charter industry (**Table 9**). The top concerns are the lack of fish, the lack of a one-day fishing license, the impacts of exotic species (zebra mussels) and fisheries management. All of these concerns are largely outside the control of individual charter captains.

Since 1994, the number of Pennsylvania charter captains has declined almost one third. With none of the 2002 respondents planning to quit the business and about 25% planning no changes in their business perhaps Pennsylvania might expect a leveling in the number of charter firms (**Table 10**). Most captains (58%) plan to increase the number of charter trips over the next five years and almost 42% plan to increase their charter fees. However, the charter businesses existing in 2002 made almost 20 fewer trips per firm than in 1994. Should the decline in the number of charter trips per firm continue, a further decline in Pennsylvania charter firms is possible.

Table 7
Annual Cash Flow of Average Pennsylvania Charter Firm

Income/Expenses	Businesses WITH Boat Loan Payments	Businesses WITHOUT Boat Loan Payments	No. of Respondents
Average Revenue	\$13,312 ¹	\$13,312 ¹	12
Cash Flow Needs			
Average operating costs	6,620 ²	6,620 ²	9
Boat loan payments	4,650 ³	0	2
Cash Needed	11,270	6,620	
Net Cash Flow	\$2,042	\$6,692	
Economic Cost			
Average operating cost	6,620	6,620	
Capital costs			
Interest Costs	2,807	2,807	
Depreciation	1,000 ⁴	0	2
Total Economic Cost	\$10,427	\$9,427	
Net Return to Operator	-(\$2,885)	(\$3,885)	

¹ Average revenues are based on 12 respondents.

² Average operating costs are based on nine respondents.

³ Two respondents reported boat loan payments.

⁴ Two respondents reported depreciation.

Table 8
Methods of Advertising Charter Fishing Businesses in Pennsylvania
12 Respondents

Advertising Method	Percent of Respondents	Number of Respondents	Effectiveness*
Word of mouth	100%	12	2.7
Brochures	92%	11	2.1
Website	67%	8	2.3
Sport & travel shows	58%	7	1.9
Direct mailings	50%	6	2.5
Charter association publications	50%	6	1.7
Signs	42%	5	2.0
Chamber of commerce publications	42%	5	1.4
Telephone directory	33%	4	2.0
Magazine ads	25%	3	1.7
Tourism promotion agency	17%	2	1.0
Newspaper ads	8%	1	2.0
Other	0%	0	0

*Scale = 1 (not effective) to 3 (very effective)

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Strategies for Charter Businesses

It is a good idea to occasionally examine your charter business management with an eye to improvement. Results of the 2002 Great Lakes charter captain surveys suggest that to increase future profitability, charter captains should reduce expenses, work to increase revenues and aggressively market their industry.

Refinancing your boat at a lower interest rate, holding onto an older paid off boat in good condition or buying a newer boat at a favorable price to avoid large repair bills may be ways to reduce your expenses.

The most direct ways to increase revenues is to increase the number of charter trips that are made by offering additional services such as executive charters, or dive charter trips. Increasing prices may or may not be possible depending on the demand and the specific market where you operate. Some captains increase the number of trips they make by following the seasonal nature of the fishery and fishing out of the "hot" ports at different times of the angling season. Half-day trips are a popular way to reduce the costs to clients and allow time for additional trips that can increase overall revenues.

Captains should carefully market their product (a nature-based tourism experience on a world class resource) and try to expand the client base to include the growing number of middle aged, nature-experience tourists with above average disposable incomes. Captains should seek ways to expand the client base by using industry-wide marketing efforts or by cooperating with local, state, and regional tourism bureaus. Captains should address the fish consumption advisory issues directly and help to educate the public on the benefits of fish consumption.

Marketing toward non-traditional customers (i.e. women and minorities) may present opportunities for increased business as does marketing executive, fly-fishing, or other special charters. Captains may also want to consider differential pricing of charters to even out charter activity. Differential pricing may help to increase charter trip activity in the spring and fall "shoulder" seasons.

Captains can continue to build on a positive professional image of the charter industry by stressing safety, effective efficient angling opportunities, a higher than average catch rate and a "world class Great Lake angling experience" in their marketing efforts.

Additionally, captains should consider membership in a professional charter captain's organization. Belonging to a professional organization allows members to work with decision makers, fishery managers, and regulators from an organized power base.

References

Dillman, D.A. 1978. *Mail and Telephone Surveys: The Total Design Method*. New York: John Wiley and Sons.

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Table 9
Concerns of the Pennsylvania Charter Fishing Industry
12 Respondents

Concerns	Percent of Respondents
Lack of fish/reduced abundance	83%
Lack of one-day nonresident fishing license	50%
Impacts of exotic species (zebra mussels)	42%
Fisheries management	42%
Fish consumption advisories	33%
Over harvest of fish stocks	25%
Lack of information on the fishery	25%
The economy	25%
Drawing clients	17%
Changes in forage fish populations	17%
Toxic contaminants	17%
Poor weather forecasting	17%
Overcrowding of the fishery	8%
Boating equipment and operating costs	8%
Poor weather/climate	8%
Other problems	8%
Government regulations	8%
Un-sportsmanlike behavior of anglers	8%
Illegal fishing practices	0%
Un-sportsmanlike behavior of captains	0%
Changes in water currents	0%
Avian Botulism	0%

Table 10
Five-Year Plans of Pennsylvania Charter Captains
12 Respondents

Activity	Percent of Respondents
Increase of number of annual trips	58%
Increase prices	42%
Buy/Operate newer boat	33%
No major changes	25%
Hire additional first mate(s)	25%
Buy/Operate bigger boat	25%
Other	17%
Branch out into other fishing related businesses	17%
Expand into multi-activity and/or non-fishing charters	17%
Buy/Operate an additional boat(s)	8%
Hire additional charter captain(s)	0%
Decrease number of annual trips	0%
Buy/Own charter boat	0%
Decrease Prices	0%
Quit the charter business	0%